TESTING TWO MODELS OF CRITICAL CONSCIOUSNESS: AN APPLICATION OF SOCIOPOLITICAL DEVELOPMENT THEORY AND THEORY OF PLANNED BEHAVIOR

BY

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THESIS

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ABSTRACT

Although there is emerging literature exploring the psychological mechanisms associated with critical consciousness (e.g., Watts et al., 2011), we know very little about individuals' actual activism behaviors. In this study, I built on the theory of planned behavior (TPB) and sociopolitical development theory (SPD) to test a model of critical consciousness among a community sample of 179 Asian American and White American adults. Participants completed an online survey about their social justice attitudes, perceived behavioral control, social norms, and social justice intention. They were also invited to sign two online petitions with social justice themes. Path analyses indicated that critical reflection of social inequality, subjective norms, and perceived behavioral control were uniquely and positively related to people's intention to act for social justice causes. Intention to act, in turn, was positively related to the observed social justice behavior while controlling for past behavior. Findings suggested that the theory of planned behavior's conceptualization was better supported in the White American adult sample, whereas the sociopolitical development theory's conceptualization was a better fit for the Asian American sample. Limitations of the study and implications for future research were discussed.

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CHAPTER 1: INTRODUCTION

The current polarized political climate and increased hate crimes influence the physical and mental health of many Americans (Duncan & Hatzenbuehler, 2014; Galea, Tracy, Hoggatt, DiMaggio, & Karpati, 2011; Samson, 2015). For example, anti-Muslim assaults in 2016 reached the highest level since 2001, the 9/11 era, according to the Pew Research Center and FBI (Kishi, 2016, November 21). Furthermore, a previous public health study found that perceived abuse directed at Arab Americans after the 9/11 attacks were linked to higher levels of self-reported psychological distress and lower levels of happiness (Padela & Heisler, 2010). Scholars have proposed that in a time of crisis and pain, developing critical consciousness – or the personal awareness of systemic inequality and desire to take action (Freire, 1970; Watts, Diemer, & Voight, 2011) – can help heal and empower people who experience oppression (Ginwright, 2011). This type of civic and social engagement is also related to positive long-term mental and behavioral health among racial minority youth (Chan, Ou, & Reynolds, 2014). Understanding ways to foster critical consciousness and social justice behaviors is important at this time for two important reasons: (1) critical consciousness can promote systematic level changes against injustices and oppression (Freire, 1970; Martín-Baró, Aron, & Corne, 1994; Watts, Williams, & Jagers, 2003) and (2) it fosters healing and hope in marginalized populations (Ginwright, 2011; Watts, Griffith, & Abdul-Adil, 1999).

The conceptualization of critical consciousness has its roots in educational philosophy. Critical consciousness, or "conscientizacao", is a term coined by Paolo Freire in 1970 through his work in educating Brazilian farmers. He described it as a process where oppressed and marginalized individuals achieve critical understanding of systemic inequality shaping their social conditions, and in turn acting to change their circumstances to liberate themselves from

oppression (Freire, 1970; Watts et al., 2011). Although this concept has been applied in many fields within education, philosophy, and psychology, the current project focuses on critical consciousness in the context of sociopolitical development. Critical consciousness from this framework consists of two main components: critical reflection and critical action (Diemer, Rapa, Park, & Perry, 2014; Prilleltensky, 2012). Critical reflection refers to a critical analysis of sociopolitical and systematic inequality, such as social, economic, and political conditions that limit access to opportunity and perpetuate injustice (Diemer & Li, 2011; Watts & Flanagan, 2007). Critical action refers to participation in individual or collective action to change aspects of society, such as institutional policies and practices, which are perceived to be unjust (Watts et al., 2011; Watts & Flanagan, 2007).

In addition, some scholars argued that critical action could be conceptualized in two subcomponents: (a) sociopolitical control, perceived self-efficacy to effect social and political change, and (b) social action, participation in social action and protest behavior (Diemer & Li, 2011). Others further conceptualized that perceived self-efficacy (sociopolitical control or perceived behavioral control) could be a part of critical consciousness (Watts et al., 2011), suggesting it moderates the relationship between critical reflection and action (Watts & Flanagan, 2007). Recently, scholars combined both perceived self-efficacy and internal motivation to identify a third component of critical consciousness – critical motivation or youths' perceived capacity and motivation to produce social change (Diemer, McWhirter, Ozer, & Rapa, 2015). However, researchers also suggest that critical motivation may be an appropriate indicator for younger people as opposed to adults, given the many age-based constraints young people face in efforts to engage civic participation (Diemer et al., 2015). Since this study uses an adult sample, it extends previous research in testing the moderation effect of perceived self-

efficacy in the relationship between critical reflection and action but it does not include critical motivation as a third component of critical consciousness.

The concept of critical consciousness is also consistent with social justice attitudes and behaviors. In psychology, social justice values are required for activities such as advocacy, analyzing public policy, community organizing, and political activism (Torres-Harding, Siers, & Olson, 2012). Moreover, these activities are examples of social justice work through challenging the status quo and creating societal transformative changes. Therefore, commitment to social justice values and behaviors delineate one's process of developing critical consciousness.

The relationship between critical reflection and action lacks empirical support and warrants more research (Watts et al., 2011). Researchers noted critical action can presuppose one's critical analysis or influencing each other in a bidirectional relationship (Freire, 1970; Martín-Baró et al., 1994; Watts et al., 2011). The question still remains: Is critical understanding of systematic inequality a sufficient condition for social action? In other words, do individuals with high critical reflection likely engage in social-justice related behaviors? And, what psychological mechanisms can influence the relationship between critical reflection and critical action? This project extends previous research by exploring the relationship between critical reflection and action by testing two models: sociopolitical development theory (SPD) and theory of planned behavior (TPB). SPD provides a helpful theoretical framework for understanding factors that potentially influence individuals' critical consciousness and positive sociopolitical engagement. TPB provides a theory that details a possible psychological path of how an individual with understanding of systematic inequality decides to take action as critical consciousness is composed of both the critical social analysis and the action taken to change systematic injustices. Thus, TPB provides a theoretical framework for observing how

individuals' beliefs are related to actual behaviors. TPB has been widely used in research on mental and physical health-related behaviors. This research study extends the previous literature and provides important information about possible paths to foster critical thinking, social analysis, and political engagement.

CRITICAL CONSCIOUSNESS IN ASIAN AMERICANS AND WHITE AMERICANS

Research on critical consciousness has generally focused on Black and Latinx populations in the Untied States. There is a dearth of studies focusing specifically on Asian American's critical consciousness. The limited research in this area shows mixed findings in understanding Asian American's civic engagement (Wray-lake & Tang, 2016). The "model minority" stereotype often leads many people to perceive Asian Americans as unengaged in civic and social activism; however, civic engagement among Asian Americans, like all Americans, varies based on developmental context, background and demographics (Wray-lake & Tang, 2016). For example, Kwon's (2008) ethnographic study examined the process of critical consciousness among 100 Asian and Pacific Islander activists in California. He found that their process of critical consciousness began with a critical analysis of their lived experiences with inequalities, and then their collective action and political activism followed (Kwon, 2008).

Although critical consciousness was originally conceptualized for people who are oppressed, this construct can also be applied to groups with privileges, such as White Americans (Diemer et al., 2015). History provides examples of individuals who reject their privilege and become allies (Watts et al., 2003). In the US, civil rights and social movements in 1980s or more recent movements, such as Black Lives Matter or Marriage Equality, often involve support and advocacy from members of the population with privileges. Researches also support that the awareness of white privilege and understanding of systematic inequality can influence

individuals' social action in their daily life, professional or clinical practices (Ancis & Szymanski, 2001; Bott, 2013; Neville, Spanierman, & Doan, 2006). Lewis, Neville and Spanierman (2012), for example, found that White students who acknowledged the structural nature of racism and possessed greater awareness of the role of race in shaping the experiences of racial and ethnic minorities in the United States were more likely to support policies to promote greater access to college to students from historically underrepresented backgrounds. Specifically, white students who participated in a greater number of campus diversity experiences reported lower levels racial colorblindness and more likely to support affirmative action (Lewis et al., 2012). Although there is research suggesting that White Americans can develop critical consciousness and become allies, this line of inquiry has remained minimal (Diemer et al., 2015).

SOCIOPOLITICAL DEVELOPMENT (SPD)

In this paper, Watts and colleagues' (1999, 2003) conceptualization of SPD is used. SPD was selected because it was developed based Freire's (1970) concept of critical consciousness. SPD is the process of how "individuals acquire the knowledge, analytical skills, emotional faculties, and the capacity for action in political and social systems necessary to interpret and resist oppression" (Watts et al., 2003, p. 185). Watts and Flanagan (2007) later extended this operationalization by identifying potential moderators in the SPD process. They outlined four components SPD: (1) Worldview and social analysis, (2) sense of agency, (3) opportunity structure, and (4) societal involvement behavior (Watts et al., 2003). Worldview and social analysis measure the individual's critical reflection and awareness of social inequity while societal involvement behavior captures both the individual's commitment and critical action to address social oppression and injustices. Sense of agency in the model is an overarching variable

referring to several theoretical constructs such as empowerment, sociopolitical control and efficacy (self, collective or political). In this framework, sense of agency and opportunity structure are hypothesized to moderate the individual's commitment and action. There is emerging support for the model. For example, Watts and Guessous (2006) found that critical social analysis, sense of agency and cultural worldview had direct effects on intention for societal involvement, but they did not predict actual behaviors. Their finding also provided support for the moderating role of agency in the association between social analysis and societal involvement behavior, such that at higher levels of experience of agency, belief in an unjust world was positively related to societal involvement behavior. At lower levels of experience of agency, the relationship was reversed; viewing the world as unjust was negatively related to behavior (Watts & Guessous, 2006).

THEORY OF PLANNED BEHAVIOR (TPB)

The theory of planned behavior (TPB) is designed to explain how individuals' beliefs can lead to actual behaviors (Ajzen, 1991). TPB states that one's behavior is best predicted by one's intention to act while intention is determined by three other variables: one's attitudes towards the behavior, subjective (injunctive) norms around the behavior, and one's perceived behavioral control of the behavior (Ajzen, 1991). Intention is held to be the motivational component that spurs an individual to engage in or exert effort to try a particular behavior (McEachan, Conner, Taylor, & Lawton, 2011). Attitudes toward the behavior refers to the individuals' (positive or negative) evaluation based on their understanding of the behavior in question (Ajzen, 1991). Subjective (injunctive) norms are the perceived social pressure to perform or not to perform the behavior based on the norms surrounding the individual's life (Ajzen, 1991). Perceived behavioral control (PBC) represents the individual's capacity and efficacy based on the

perceived ease or difficulty of performing the behavior, and it is assumed to reflect past experience as well as anticipated impediments and obstacles (Ajzen, 1991). PBC is also based on Bandura's (1977) self-efficacy (Ajzen, 1991). In the area of social justice, perceived behavioral control captures one's perceived capacity and efficacy to produce social change (Torres-Harding et al., 2012). Thus, it can be viewed as the sense of agency in the area of social justice. Perceived behavioral control also is theorized to directly predict behavior in TPB model.

TPB has been successfully applied to a range of health-related behaviors with diverse populations and has been showed to have medium to large effect sizes in more than nine meta-analyses (see Ajzen, 2011). For example, McEachan et al. (2011) conducted the most recent meta-analysis with 237 studies and found the intention–behavior correlation to have a moderate effect size, .43 and the perceived control–behavior correlation has a lower effect size, .31 in prospective studies on health related behaviors, such as physical activity, dieting, safer sex and abstinence from drugs. McEachan et al. (2011) also found that the correlations of attitudes, subjective norms and perceptions of control with intentions ranged from .40 to .57.

PRESENT STUDY

The purpose of the study was to test a model of critical consciousness based on the integration of two theories: SPD and TPB. SPD states that individuals' critical reflection (CR) would have a direct relation to their observed social justice behavior (OSJB) while perceived behavioral control (PBC) would moderate this relationship (see Figure 1).

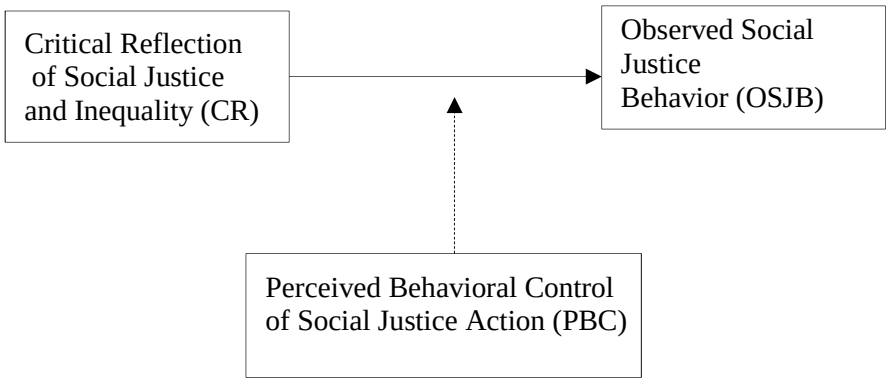

Figure 1. Conceptualization of Critical Consciousness based on SPD

Adapting TPB, three variables are of particular interests: critical reflection, subjective norms, and perceived behavioral control, and their association with individuals' intention and observed social justice behavior (see Figure 2).

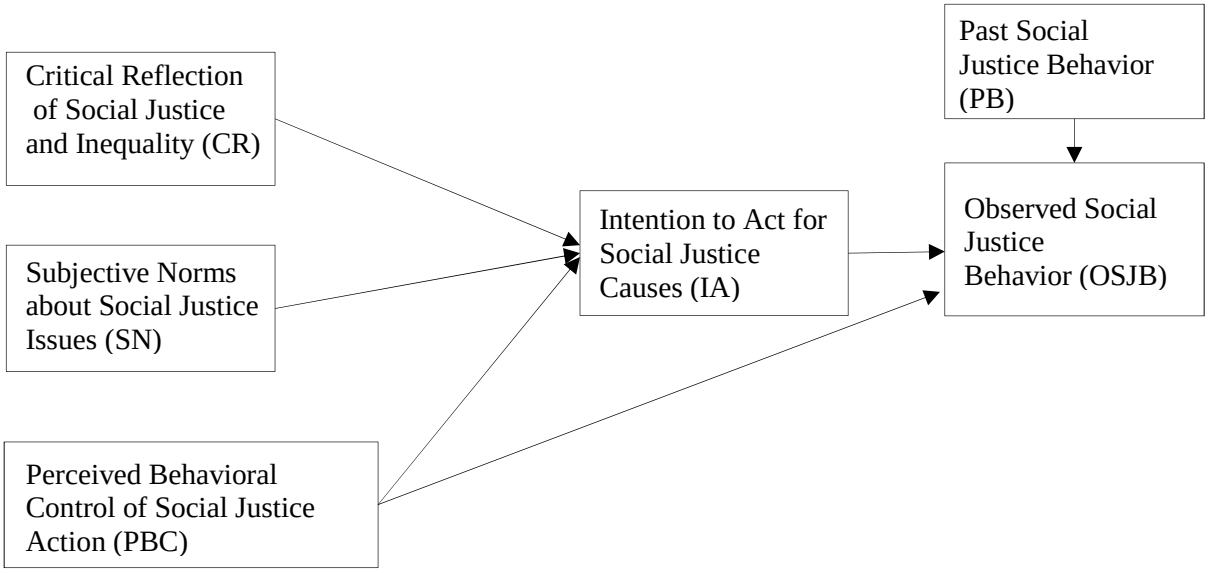

Figure 2. Conceptualization of Critical Consciousness based on TPB

The integrated model of critical consciousness tested in this study is outlined in Figure 3; the model incorporates both SPD and TPB frameworks.

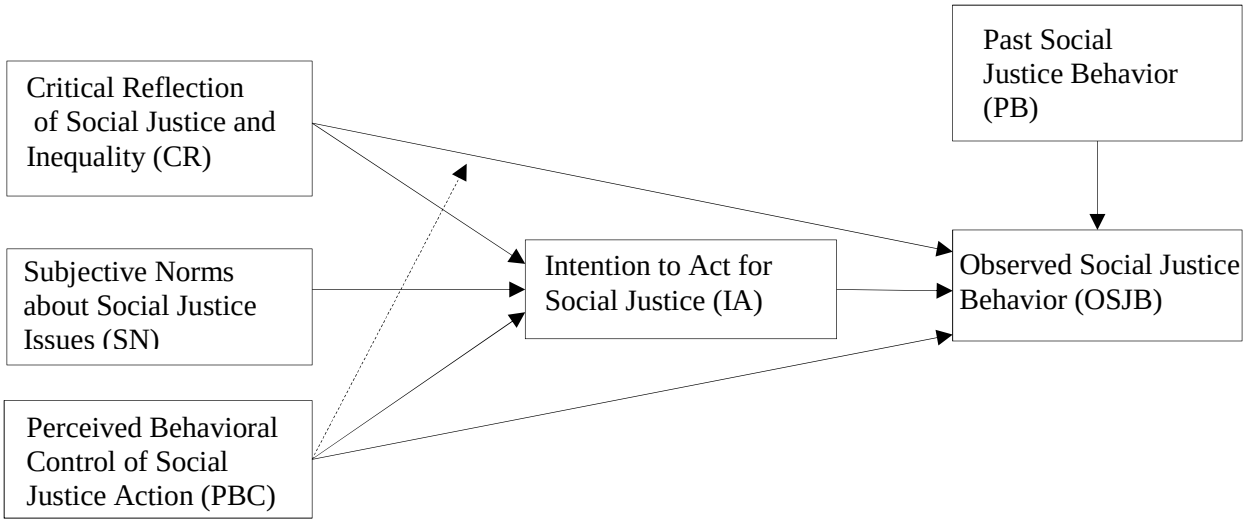

Figure 3. The Integrated Model of Critical Consciousness

Consistent with the literature on SPD and TPB that serve as the foundation for the integrated model of critical consciousness, I hypothesized the following:

1. Individuals with higher levels of critical reflection of social justice, perceived behavioral control (PBC – perceived self-efficacy in social activism), and favorable subjective norms (SN) would be related to stronger intentions to act toward social justice causes (IA).
2. Based on the logic of TPB, PBC AND IA would have a positive association with observed social justice behaviors (OSJB) while controlling for past behavior (PB). That means individuals with a greater level of perceived behavioral control (PBC) and a stronger intention to act for social injustice (IA) would more likely to engage observed social justice behaviors while controlling for past behaviors.

In addition, on the basis of the theory of SPD, I hypothesized that:

3. Critical reflection of inequality (CR) would be positively related to observed social justice behaviors (OSJB).

4. Perceived behavioral control (PBC) would moderate the relationship between individuals' critical reflection of inequality (CR) and observed social justice behaviors (OSJB).

Finally, I was interested in exploring how the integrated model differs across Asian American and White American samples.

CHAPTER 2: LITERATURE REVIEW

In this section, I first discuss the history and development of critical consciousness and present its influences in the area of sociopolitical development. I also discuss its antecedents and consequences as well as explore critical consciousness among Asian Americans and White Americans sample, which is the focus of this current study. Next, I provide a review of two major theoretical frameworks related to critical consciousness: sociopolitical development theory (SPD) (Watts et al., 2003) and theory of planned behavior (TPB) (Ajzen, 1991). Subsequently, I offer a critical review of the empirical research on these two theories and outline the research direction needed to further the understanding of the process of critical consciousness across different race, particularly for Asian Americans and White Americans.

CONCEPTUALIZATION OF CRITICAL CONSCIOUSNESS

The Brazilian philosopher, educator and activist, Paolo Freire (1970), originally coined the term "conscientizacao" or critical consciousness. Based on his work to increase literacy among Brazil's poor and disadvantaged, Freire described critical consciousness as a process where people who experience oppression achieve critical understanding of structural and systemic inequality shaping their social conditions. It is through this understanding people act to change their circumstances in an aim to liberate themselves from oppression (Freire, 1970; Watts et al., 2011). The process of critical consciousness has been viewed as an educational tool and one "antidote" to overcoming systematic and structural inequality (Watts et al., 1999). Subsequently, Freire's philosophy and liberation psychology (Martín-Baró et al., 1994) have became a foundation for understanding how oppressed populations acquire their awareness of inequity and create change through social justice action and political involvement (Diemer & Li, 2011; Ginwright & James, 2002; Watts et al., 1999).

The conceptualization of critical consciousness in specific writings of Watts and his colleagues (Watts et al., 2011; Watts et al., 1999) and Prilleltensky (2012) ground the current study because of its focus in sociopolitical development and social justice behaviors. Based on Freire's (1970) work, scholars have conceptualized critical consciousness as consisting of two main components: critical reflection and critical action (Diemer et al., 2014; Prilleltensky, 2012). Critical reflection refers to a critical analysis of sociopolitical and systematic inequality, such as social, economic, and political conditions that limit access to opportunity and perpetuate injustice (Diemer & Li, 2011; Watts & Flanagan, 2007). Critical action refers to participation in individual or collective action to change aspects of society, such as institutional policies and practices, which are perceived to be unjust (Watts et al., 2011; Watts & Flanagan, 2007). Moreover, critical action is transformative in nature and not merely ameliorative (Prilleltensky, 2012). Some scholars argued that critical action consists of two subcomponents: (a) sociopolitical control or perceived self-efficacy to effect social and political change, and (b) social action or participation in social action and protest behavior (Diemer & Li, 2011). Others further conceptualized that perceived self-efficacy (sociopolitical control or perceived behavioral control) moderates the relationship between critical reflection and action (Watts & Flanagan, 2007). Recently, scholars combined both perceived self-efficacy and internal motivation to define the third component in critical consciousness as "critical motivation", or individuals' perceived capacity and motivation to produce social change (Diemer et al., 2015). However, researchers also warned that this construct might be a more developmentally appropriate indicator for young people in their process of developing critical consciousness, given the many age-based constraints young people face to actual civic participation or social activism (Diemer

et al., 2015). Since this study used an adult sample, I did not include critical motivation as a third component for the conceptualization of critical consciousness.

The relationship between critical reflection and critical action remains obscure and warrants more research. Critical action can presuppose one's critical analysis of social conditions or reciprocate each other (Freire, 1970; Martín-Baró et al., 1994; Watts et al., 2011). Some scholars even suggest that this process is more complex and more like a transactional relationship with social context and life experiences creating cumulative and dynamic effects (Carmen et al., 2015). As a result, many researchers have studied and hypothesized multiple factors, such as self-efficacy, in their models that may influence the process of critical consciousness (Carmen et al., 2015; Ginwright & Cammarota, 2002; Watts et al., 2003).

The concept of critical consciousness has been studied and applied in various fields in psychology and education, albeit under different names. In the area of positive youth development, Watts et al. (1999) proposed the sociopolitical development theory (SPD), consisting of five stages describing individuals' navigation from understanding systematic inequity to performing social justice actions. Watts and his colleagues (2003) modified the model to better capture SPD as a more fluid process. Watts and Flanagan (2007) provided an empirical framework to guide researchers on how to further study sociopolitical development, especially among adolescents. They described how youths' process of sociopolitical development in five stages could be studied through these constructs: worldview and social analysis, sense of agency, opportunity structure, and societal involvement. SPD model is described in more details below as it serves as one of the theoretical foundations for this research project.

Critical consciousness is also consistent with social justice attitudes and behaviors. Social justice has been defined in many ways in the field of psychology (see: Constantine, Hage, Kindaichi, & Bryant, 2007; Fouad, Gerstein, & Toporek, 2006; Prilleltensky, 2001; Toporek & Williams, 2006). In general, it "is a value or belief, encompassing the idea that people should have equitable access to resources and protection of human rights" as well as encompassing "the idea that structural and social inequalities should be minimized, and that society should work toward empowerment with people from disadvantaged or disempowered groups" (Torres-Harding et al., 2012, p. 78). In other words, social justice focuses on the topic of power and how it plays a role in systematic social inequity. In psychology, social justice values are required for activities such as advocacy, analyzing public policy, community organizing, and political activism (Torres-Harding et al., 2012). Moreover, these activities are examples of social justice work through challenging the status-quo system that enforces injustices and creating societal transformative changes. Therefore, the definition of social justice delineates the process of developing one's critical consciousness.

CORRELATES OF CRITICAL CONSCIOUSNESS

Critical consciousness and engagement in social activism can promote positive long-term effects on mental health (Ginwright, 2011; Zimmerman, Ramirez-Valles, & Maton, 1999), overall well-being (Chan et al., 2014; Prilleltensky, 2012), academic adjustment (Cammarota, 2004, 2007; O'Connor, 1997; Sanders, 1997; Yosso, 2002), and career outcomes (Diemer, 2009; Diemer & Blustein, 2006; Diemer et al., 2010). For example, Chan, Ou, and Reynolds (2014) tracked the level of social and civic engagement of 854 adolescents and young adults over 6-8 years. Their findings suggested that civic engagement in adolescence is related to greater life

satisfaction, civic participation, and educational attainment, and also lower rates of arrest in adulthood.

Furthermore, promoting critical consciousness is also related to transformative change in professional practice such as social workers working with LGB clients through LGB promising practices (Bott, 2013), or successful social mobilization effort in public health areas such as the prevention of intimate partner violence and HIV infection in South Africa (Hatcher et al., 2010). For example, Bott (2013) studied 220 social workers through a cross-sectional survey and found that those who have greater critical consciousness also engage in more LGB promising practices and social justice activities in their personal and professional lives.

CRITICAL CONSCIOUSNESS AMONG ASIAN AMERICANS

There are only a few studies focusing specifically on Asian American's critical consciousness. This may be because research shows mixed findings in understanding Asian American's civic engagement (Wray-lake & Tang, 2016). Asian American's "model minority" stereotype often leads many people to view this population as civically unengaged; however in reality, the civic engagement of Asian Americans is complex and dependent on developmental context, background and demographics (Wray-lake & Tang, 2016). For example, Wray-lake and Tang (2016) explored the civic engagement experiences of 3,556 Asian American undergraduate students. They found ethnic, cultural and religious background, family immigration history, and discrimination faced in the US, each contributed to civic engagement student activities. Wray-lake and Tang also provided empirical support for the influence of social norms in Asian Americans participation in civic engagement activities. Kwon's (2008) ethnographic study examined the process of critical consciousness among 100 Asian and Pacific Islander young activists in California. He found that youth first developed a critical analysis of their lived

experiences with inequalities, and then their collective action and political activism followed (Kwon, 2008). In his study, young individuals' critical action also involved oppositional consciousness, challenging the status-quo through different forms of resistance (Kwon, 2008). Collectively, these studies yield some empirical support for the importance of subjective norms on the civic behaviors of diverse Asian Americans.

CRITICAL CONSCIOUSNESS AMONG WHITE AMERICANS

Although the literature on critical consciousness has focused on the experiences of marginalized populations, researchers have extended the concept to groups with privileges (e.g., white skin, male sex, elite social class). History provides examples of individuals who minimize their privilege and become allies to those who are oppressed (Diemer et al., 2015; Watts et al., 2003). Moreover, White Americans also can have multiple intersectional identities that subject them to varying degrees of oppression (e.g., sexual orientation, class, gender) (Watts et al., 2003). There are some empirical findings suggesting White Americans can become allies when they begin to obtain an understanding and awareness of systematic inequality. For example, Lewis et al. (2012) found that White students who acknowledged the structural nature of racism and possessed greater awareness of the role of race in shaping the experiences of racial and ethnic minorities in the United States were more likely to support policies to promote greater access to college to students from historically underrepresented backgrounds. Specifically, White students who participated in a greater number of campus diversity experiences reported lower levels racial colorblindness and were more likely to support affirmative action. Additionally, Bott's (2013) study with a sample of majority White, heterosexual social workers showed that those who have greater critical consciousness also engage in more LGB promising practices and social justice activity in their personal and professional lives.

SOCIOPOLITICAL DEVELOPMENT (SPD)

For the purpose of the this study, SPD follows the conceptualization of Watts et al. (1999). They proposed a five stage model of sociopoltical development. Their model expanded on the empowerment literature and social activism in community psychology, as well as liberation and developmental psychology. SPD is the process of how "individuals acquire the knowledge, analytical skills, emotional faculties, and the capacity for action in political and social systems necessary to interpret and resist oppression" (Watts et al., 2003, p. 185). Importantly, critical consciousness is considered a prerequisite for the further development in SPD (Watts et al., 2003). Over the years, Watts and his colleagues modified the their theory based on empirical findings and suggestions. In 2007, Watts and Flanagan introduced empirical guidelines for how researchers can study individuals' process of sociopolitical development by examining at different psychological variables that may moderate the association between awareness of inequality and social action.

Watts et al.'s (1999) original SPD model consisted of the following 5 stages: (1) Acritical, (2) Adaptive, (3) Precritical, (4) Critical, and (5) Liberation. In these stages, the individual moves from having the lack of awareness of systemic social inequity (a belief in a "just world") to gaining more awareness of social injustice, and then through the feelings of empowerment, discontent, indignation, and empathy that motivate the individual to gain a sense of agency and proceed to act for changes (Watts et al., 2003). According to SPD, at the first stage, Acritical, individuals do not have the understanding of societal structural inequality, thus they see that the existing order merely reflects real differences in the capabilities of group members (for example, black people do not work hard enough to achiever higher academic outcomes). In the second stage, the individuals may begin to acknowledge the systematic social

asymmetry but also believe this system cannot be changed, and as a result, they learn to adapt even when having maladaptive coping mechanisms. When individuals understand the system of inequality and begin to question their process of adaptation in an unjust society, they move to the third stage of SPD development, Precritical. At the fourth stage, Critical, individuals gain a desire to learn more about structural injustices, oppression, and liberation, and for some, they may decide that taking action is needed. Finally at the fifth stage, Liberation, people stop their adaptive process and also act upon their critical analysis and commit to social justice behaviors.

Watts and colleagues advanced the initial SPD model in two important ways. First, Watts, Williams, and Jager (2003) refined the model as a more fluid and transactional process while taking into consideration of historical, cultural and ecological factors. They wrote: "One way to view SPD is as a cumulative effect of many transactions over time that increase sociopolitical understanding (insight and ideology) and the capacity for effective action (liberation behavior)" (Watts et al., 2003, p. 192). The revised model incorporates the ways in which individuals can move back and forth between the five stages, depending on their understanding of different systems of inequality (e.g. racism, sexism, classism, and etc.). Next, Watts and Flanagan (2007) outlined a framework for empirical research in youth activism and identified potential moderators in the five-stage model of SPD. They indicated in order to study how individual moves through different stages of SPD, researchers could study four main variables: (1) Worldview and social analysis, (2) sense of agency, (3) opportunity structure, and (4) societal involvement behavior (SIB) (Watts et al., 2003). Worldview and social analysis measures the individual's critical reflection and awareness of social inequity while societal involvement behavior (SIB) captures both the individual's commitment and critical action to address social oppression and injustices. Sense of agency in the model is an overarching variable

referring to several theoretical constructs such as empowerment, sociopolitical control and efficacy (self, collective or political).

In the SPD model, sense of agency is hypothesized to moderate individuals' commitment and action. This construct is based on the concept of self-efficacy from Bandura's (1977) social cognitive learning theory and the notion of sociopolitical control by Zimmerman and Zahinser (1991). Watts, Diemer, and Voight (2011) later refined sense of agency to encompass political efficacy–the perceived capacity to effect social and political change by individual and/or collective activism. Opportunity structure is another variable that influences SPD process by taking into account the resources available to shape and permit action based on one's critical analysis. For example, young people from low-income, disadvantaged backgrounds may have a harder time finding resources, opportunities and support for their social and political activism. Both sense of agency and opportunity structure are thus theorized as potential moderators for specified process.

Although Watts and colleagues' (2003) framework was developed to explain critical consciousness among youth, empirical findings from their qualitative research with 16-35 year old African American activists indicates the model is relevant for adults as well. These findings suggest that the process of SPD is more accumulative, collective and transgenerational across different age and group of adolescents (Carmen et al., 2015). In this process, social identities and contexts can intersect and complicate how people understand, contest, reimagine, and transform oppressive circumstances (Carmen et al., 2015).

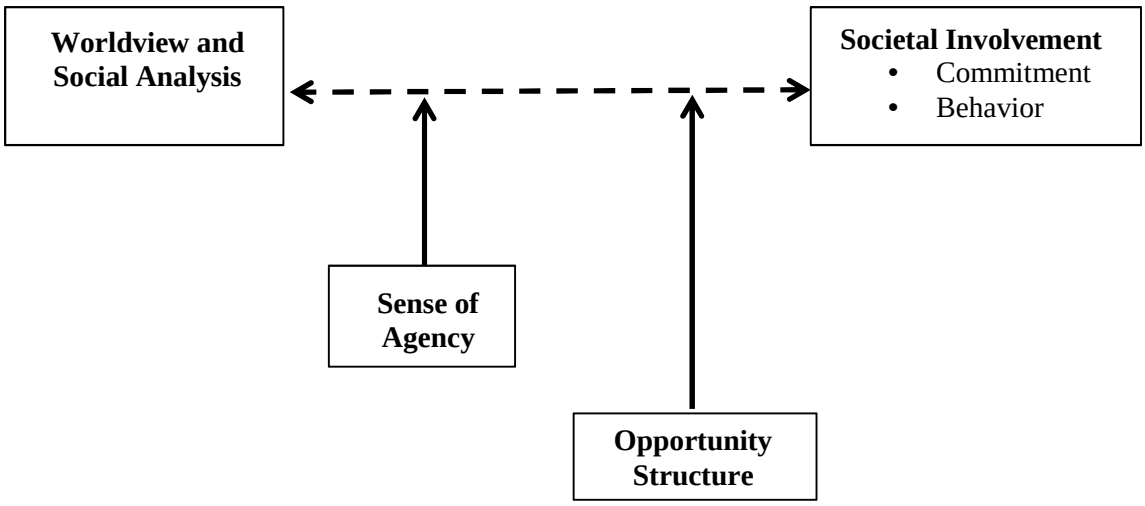

Figure 4. Adapted from Watts and Flanagan (2007) SPD potential moderators

Empirical findings for SPD

A number of scholars have used the SPD framework (Diemer & Li, 2011; Diemer et al., 2014; Hope & Jagers, 2014; Kirshner & Ginwright, 2012; Thomas et al., 2014). For example, Watts and Guessous (2006) explored the relationship between social analysis and societal involvement behavior. They surveyed 131 youth living in Atlanta and used hierarchical linear regressions to examine the main effects of SPD model. Their findings showed that social analysis, sense of agency and cultural worldview had larger size effects on commitment to societal involvement but failed to predict behaviors. They also found that the experience of agency moderated the relationship between social analysis and SIB, such that higher experience of agency was related to stronger association between social analysis and SIB. Similarly, Hope and Jager (2014) found that critical analysis of sociopolitical systems and government institutions were positively associated with civic engagement among Black youth. They also showed that political efficacy was positively related to civic engagement. In sum, these studies provided empirical support for critical social analysis and political efficacy and their associations to social activism and engagement.

On the other hand, although scholars theorized that opportunity structure potentially serves as a moderator in SPD model (Ginwright & Cammarota, 2002; Ginwright & James, 2002; Watts & Flanagan, 2007), currently there is little empirical support for this assumption. Consequently, the current study aims to apply SPD model to explore the process of critical consciousness in the area of sociopolitical development and social justice.

SOCIAL JUSTICE AND THEORY OF PLANNED BEHAVIOR (TPB)

Social justice is a concept that encompasses the understanding of systematic inequality and action to address or minimize structural social injustices. Social justice behaviors create positive societal changes by challenging the status-quo system that enforces injustices. Thus, working in social justice delineates the process of developing one's critical consciousness. Learning how an individual moves from social justice values/attitudes to action can be understood through Ajzen (1991)'s theory of planned behavior (TPB) (Torres-Harding et al., 2012).

The theory of planned behavior (TPB) is a model that explains the link between attitudes and behaviors. TPB is useful to guide the research for understanding critical consciousness because critical consciousness is conceptualized as both understanding inequality and taking action to change systematic injustices. TPB provides a theoretical framework for observing how individuals' beliefs are related to actual behaviors. Figure 2 shows the relationships among the hypothesized variables in TPB.

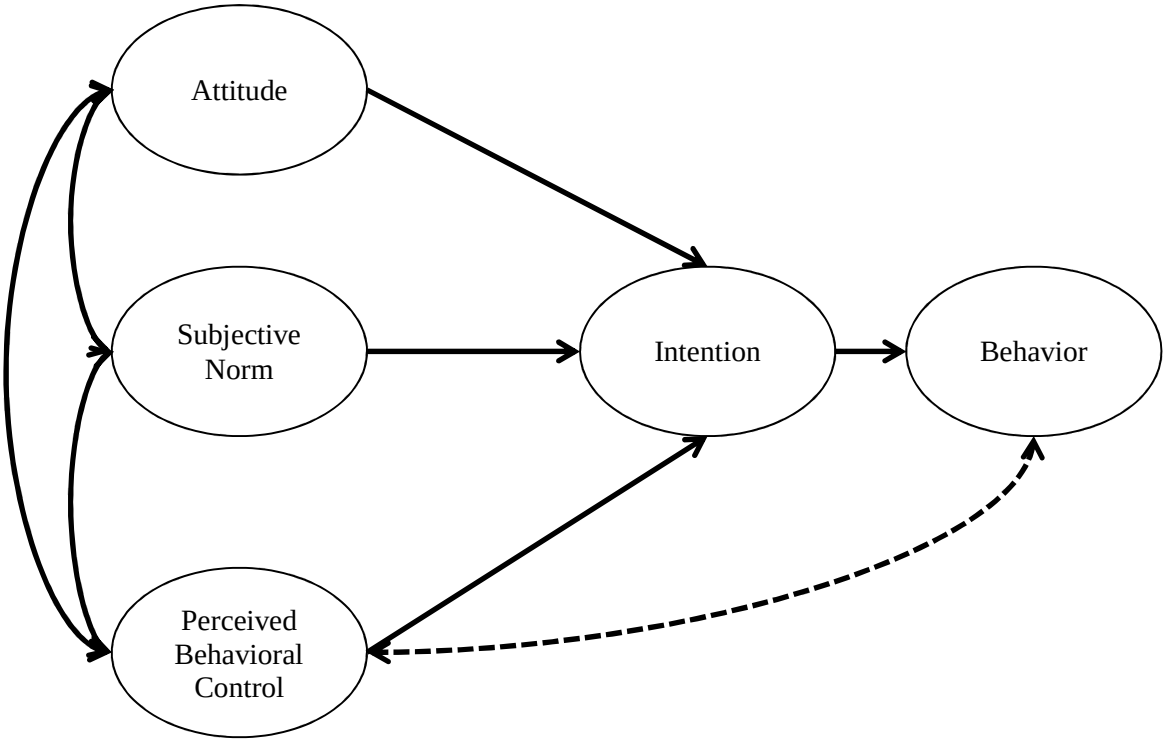

Figure 5. Adapted from theory of planned behavior by Ajzen (1991)

TPB explains that one's behavior is best predicted by one's intention to act while intention is determined by three other variables: one's attitudes towards the behavior, subjective (injunctive) norms around the behavior, and one's perceived behavioral control of the behavior (Ajzen, 1991). Intention is held to be the motivational component that spurs an individual to engage in or exert effort to try a particular behavior (McEachan et al., 2011). Attitudes toward the behavior refers to the individuals' (positive or negative) evaluation based on their understanding of the behavior in question (Ajzen, 1991). Subjective (injunctive) norms are the perceived social pressure to perform or not to perform the behavior based on the norms surrounding the individual's life (Ajzen, 1991). Perceived behavioral control represents the individual's capacity and efficacy based on the perceived ease or difficulty of performing the behavior, and it is assumed to reflect past experience as well as anticipated impediments and obstacles (Ajzen, 1991). Specified construct is also based on Bandura's (1977) self-efficacy. In the area of social

justice, perceived behavioral control captures one's perceived capacity and efficacy to produce social change. Thus, it can be viewed as the sense of agency in the area of social justice. Perceived behavioral control also is theorized to directly predict behavior in TPB model.

TPB has several critical assumptions. First, the model emphasizes the behavior's intention can only predict actual behavior when the behavior is under volitional control (i.e. the person has free will to perform or not perform the behavior) (Ajzen, 1991). Ajzen (1991) specifically indicated that this condition could be influenced by social and environmental factors such as opportunity structure and resources available to the individual. This assumption is similar to Watts and Flanagan's (2007) argument for opportunity structure as a potential moderator. Therefore, it is important to keep this key assumption in mind when applying TPB to the context of sociopolitical and social justice action.

The second major TPB assumption is based on the concept of the correspondence (compatibility) between attitudinal and behavioral entities (Ajzen & Fishbein, 1977). It explains that all measures of behavior and TPB explanatory variables should have the same context, time, population and action (actual behavior), in order to gain the strongest relationships (effect size) between model components (Ajzen, 1991). For example, testing students' attendance in a psychology class, researcher needs to capture the students' attitude of this particularly psychology class with specific context (same professor and same classroom for example) and time frame (the time of the class).

Empirical findings for TPB

TPB has been successfully applied to a range of health-related behaviors with diverse populations and evaluated in more than nine meta-analyses (see Ajzen, 2011). Attitudes, subjective norms and perceived behavioral control generally produced mean multiple

correlations with intentions that ranged from .59 to .66 (Ajzen, 2011). Sheeran's (2002) review reported a mean correlation of .53 between intention and behavior. Armitage and Conner (2001) conducted a meta-analysis with 161 articles contained 185 independent empirical tests of the TPB, and they found the mean correlation to be .40 between perceived behavioral control and intention.

McEachan et al. (2011) conducted the most recent meta-analysis with 237 studies; they found the intention–behavior correlation to be .43. However, for the perceived control–behavior correlation (.31) was lower in the prospective studies predicting health related behaviors, such as physical activity, dieting, safer sex and abstinence from drugs. McEachan et al. (2011) also found that the correlations of attitudes, subjective norms and perceptions of control with intentions ranged from .40 to .57, producing a multiple correlation of .67. Additionally, McEachan et al. (2001) shed light on identifying potential moderators that affect TPB model for prospective studies (study that assesses the behavior at some time after administering the TPB survey). They found behavior type and methodological design, such as age of sample, length of follow-up and type of behavioral measure, moderated the behavior prediction in TPB model (McEachan et al., 2011). In particularly, behaviors assessed in the shorter term (generally less than 5 weeks), and those assessed with self-reports (compared with objective measures) were also better predicted (McEachan et al., 2011). Although TPB has been successfully applied to a variety of health related behaviors, it has not been used in the area of sociopolitical development and social justice action (Torres-Harding et al., 2012). Therefore, my study aims to apply TPB to explore the process of critical consciousness in the area of sociopolitical development and social justice among white and Asian American adults.

RATIONALE AND PURPOSE

Although researchers have applied SPD in their conceptualization of critical consciousness and sociopolitical development, the relationship between critical reflection and action and potential moderators (sense of agency/political efficacy and opportunity structure) remains uncertain and warrants more research (Watts et al., 2011). For example, Hope and Jager (2014) found that critical analysis of sociopolitical systems and government institutions was positively associated with civic engagement among black youth, and political efficacy had a direct positive correlation to civic engagement. However, they did not test political efficacy as a moderator for the relationship between critical social analysis and civic engagement (critical action). Their study used cross-sectional data with no control for past behavior in civic engagement. Watts and Guessous (2006) tested the SPD model with sense of agency as a moderator. Their research findings showed that social analysis, sense of agency and cultural worldview had larger effect on commitment to societal involvement but did not predict behaviors (Watts & Guessous, 2006).

Watts and Flanagan (2003) suggested SPD could also be studied for populations with privileges (e.g., White skin, male sex, elite social class), and because this group also can have different social identities that subject them to varying degrees of oppression. Additionally, Diemer and colleagues (2015) argued that people, "who experience relative privilege in some areas of their lives, may also critically reflect upon inequality, develop the agency to produce change, and participate in critical action to create a more just world" (p. 811). This line of inquiry has remained minimal in the body of literature (Diemer et al., 2015), and hence it is examined in this current study to fill the literature gap.

In addition, TPB has been extensively supported in predicting human social behavior , but there is little empirical study using TPB to understand social justice action (Torres-Harding et al., 2012). However, researchers indicate that TPB can serve as a particularly relevant framework to explain how critical reflection may eventually predict critical action in the context of social justice-related behaviors (Torres-Harding et al., 2012). Therefore, the purpose of the current study was to the integrated model of critical consciousness among Asian American and White American adults.

CHAPTER 3: RESEARCH METHOD

PARTICIPANTS

Participants came from Wave 6 of the Illinois Longitudinal Diversity Project. ILDP examines students' diversity attitudes during four years of college and 12 years after entering college. A group of 183 (115 White American and 68 Asian American/Biracial) participants, who completed at least 90% of the survey, were selected for this project and the response rate for each group was 19% and 20% respectively. Four cases were removed for duplicate ID number and identical demographic information.

Among the final sample of 179 participants (113 White American and 67 Asian American), approximately 54% were women (n = 96), and 46% were men (n = 83). The mean age of participants was 30.06 years (SD = 0.42). Participants completed at least a four-year college degree.

MEASURES

Demographic information. Participants provided demographic information regarding their age, gender, racial and ethnic identity.

Social Justice Scale (SJS). The Social Justice Scale (SJS) (Torres-Harding et al., 2012) consists of four subscales: Social Justice Attitudes, Perceived Behavioral Control, Subjective Norms, and Behavioral Intentions. SJS was chosen because the scale was designed specifically to capture social justice attitudes and intention from the theory of planned behavior (TPB). TPB is also one of the theoretical frameworks used to inform the integrated model tested in this study, thus SJS is a good fit as it follows the framework and the assumptions of TPB. All observed constructs that are measured by SJS directly map onto the models being tested. SJS was used to measure the four main constructs: (1) critical reflection of social inequity, (2) subjective norms about social justice issues, (3) perceived behavioral control of social justice action, and (4)

intention to act for social justice causes. Participants answered on a 1–7 point scale, with 1 (*strongly disagree*) to 7 (*strongly agree*). SJS is Social Justice Attitudes (SJA) subscale has 11 items. SJA measures one's critical analysis of social inequity (e.g. "I believe that it is important to make sure that all individuals and groups have a chance to speak and be heard, especially those from traditionally ignored or marginalized groups"). For the purposes of our study, the SJS scale assesses critical reflection as described in the sociopolitical development model of critical consciousness.

Perceived Behavioral Control (PBC) subscale has 5 items and measures individuals' perceived capacity and efficacy in creating social change through their actions (e.g. "if I choose to do so, I am capable of influencing others to promote fairness and equality"). It is important to notice that PBC subscale particularly focused on the social justice related goals rather than simply general self-efficacy (Torres-Harding et al., 2012).

Subjective Norms (SN) subscale has 4 items assessing whether people in the respondents' social context supported or discouraged engagement in social justice related activities (Torres-Harding et al., 2012) (e.g. "other people around me are engaged in activities that address injustices"). Lastly, Behavioral Intentions (BI) consists of 4 items (e.g. "in the future, I will do my best to ensure that all individuals and groups in my community have a chance to speak and be heard").

In general, higher scores in any SJS subscales indicate that individuals have better understanding of social justice issues, higher capacity and efficacy in social justice related activities, more support and positive encouragement in their immediate environment toward social justice related activities, and stronger intention to act for social justice causes.

SJS was tested using two sets of samples consisting of undergraduate and graduate students with high percentage of female and predominantly European Americans. The reliability estimates and factor structure of the scale were tested in the first sample (Torres-Harding et al., 2012). SJS was then revised and tested using the confirmatory factor analysis on both samples. The results showed a very good fit of the data, and independent samples *t* tests, one-way ANOVA and Bonferroni post-hoc tests also showed no differences across various demographic categories (Torres-Harding et al., 2012). There was one exception; individuals who identified as having a disability, reported higher levels of intentions to engage in social justice activities than individuals who did not have a disability (Torres-Harding et al., 2012).

There is emerging psychometric support for the SJS among young adult and adult populations. For example, SJA subscale had Cronbach's alpha ranging from .87 (Branson, 2015) to .95 (Torres-Harding et al., 2012). PBC had Cronbach's alpha ranging from .66 (Kozlowski, Ferrari, & Odahl, 2014) to 0.84 (Torres-Harding et al., 2012). SN had Cronbach's alpha ranging from .81 (Kozlowski et al., 2014) to .82 (Torres-Harding et al., 2012). BI had Cronbach's alpha of .88 (Kozlowski et al., 2014; Torres-Harding et al., 2012). For the current study, the Cronbach's alphas were .93 for Social Justice Attitudes, .86 for Perceived Behavioral Control, .87 for Subjective Norms, and .92 for Intention subscale.

Past behavior. A one-item question was created for this study to control for the effect of past behavior: "In the past year, have you signed an online petition about a social justice related topic? (for example, Black Lives Matter movement, LGBT rights, sexual assault on college campus, and etc.)". Respondents had five choices stating whether they signed zero, one, two, three, four or more petitions.

Observed social justice behavior. Observed social justice behavior (OSJB) was measured by participants' decision to sign one or two online petitions at the end of the online survey. Directions were provided to explain that these two petitions were chosen from Change.org with established causes and they did not necessarily reflect the researchers' opinions. The first petition called for criminal justice reform to shrink the incarceration industry in America and lower incarceration rate particularly for young people of color (Jones, 2016). The second petition gathered support to fight for a higher minimum wage (The Fairness Project, 2016). Each petition was coded with 0 or 1 for whether the participant chose to sign or not. Thus, the final measure had two levels (0, 1) to correspond to what participant decided to sign.

PROCEDURE

Illinois Longitudinal Diversity Project (ILDP) follow-up study was conducted 12 years after the participants entered college as first year students. Institutional Review Board approved for the project to recently resume data collection. The updated email addresses were obtained for 1363 racially diverse ILDP alumni from the university online database. Several steps were taken to protect respondent's identity. The answers were confidential and participants' name were not listed on the survey. Each participant was identified a personal code number, which was assigned to each survey. All respondents' responses were sent directly to a password-protected database, separate from their name and email address, accessible only to the primary researchers. The master list with the names, contact information, and corresponding code numbers was kept in a secure location, separate from the data the participants provided.

The data collection began on August 26, 2016. All potential participants were emailed a recruitment letter and a code number for identification. For participants who chose to participate, they completed one online survey with the consent form that would take

approximately 15 minutes to finish in their leisure time. At the end of the survey, participants were also asked whether they would like to sign two Change.Org petitions. Again, participants could choose to sign or not sign the petitions. For alumni who did not respond to the first email invitation, two other follow-up emails were sent at approximately one-week intervals. In the study, first follow-up email was sent on September 9, 2016 and the second follow-up was sent on September 18, 2016. Participants who completed a majority of the items on the survey had the opportunity to enter into a drawing for four Visa gift card prizes: One $500 and three $100 prizes. To increase more Asian American participants, the third follow-up email was sent on November 7, 2016 to this group specifically with additional reward option to receive $5 Starbucks e-gift card or equivalent. The total response rate was 21% with 274 alumni participated in ILDP Wave 6.

CHAPTER 4: DATA ANALYSIS

DATA SCREENING

Data were cleaned and screened for univariate normality by examining the histograms, skewness, and kurtosis statistics. All variables of interest met the criteria for univariate normality with normally distributed histograms, skewness < $\pm$3, and kurtosis < $\pm$10 (Weston & Gore, 2006). Boxplot and computed *z* scores also were used to identify outliers. Outliers with extreme scores were found in three cases on the Social Justice Attitudes subscale, and one case on the Behavioral Intentions subscale. For the Social Justice Attitudes subscale, two cases were in the Asian American sample and one was in the White American sample. For the Behavioral Intentions subscale, the one outlier was found in the White American sample. Outliers were expected to due the conceptualization of variables that based on individual's attitudes, social norms and intentions, especially right before 2016 presidential election. When detected, outliers' raw scores were assigned to the next most extreme score in the distribution (Tabachnick & Fidell, 2007) for each racial group. Additionally, seven cases were identified as multivariate outliers ($p < .001$) (Tabachnick & Fidell, 2007). Thus, a robust estimator was used in subsequent analyses to account for non-normality.

Missing data were identified and degree of missingness was explored. Missing data were less than 4% for the Asian American sample and less than 3% for the White American sample. These data were found to be missing completely at random (MCAR). The missing data were handled by pairwise present analysis through estimator robust weighted least squares or WLSMV (B. Muthén, du Toit, & Spisic, 1997). Because the data were relatively few and they were missing completely at random, pairwise present analysis is efficient and can produce similar results to full-information maximum likelihood (FIML) (Asparouhov & Muthén, 2010; B. Muthén, Kaplan, & Hollis, 1987).

ANALYTIC STRATEGY

Path analysis was conducted using M*plus* version 7.4 (L. Muthén & Muthén, 1998-2015) using a robust weighted least squares (WLSMV) to test the integrated model of critical consciousness and the four research hypotheses related to the model (see Figure 3). WLSMV estimator was chosen because it allows inclusion of both continuous and categorical variables in the model. The SJS subscales and past behavior measure used in this study were considered continuous while observed social justice behavior was considered categorical in the analyses. Observed social justice behavior (OSJB) was coded with 0 or 1 for whether the participant decided to sign a petition. Weighted least squares estimator with standard errors and chi-square statistics were used because they are robust to non-normality (B. Muthén et al., 1997).

The integrated model of critical consciousness is labeled as model a in Figure 3. Consistent with best practices in structural equation modeling, I also tested conceptually derived alternative models. Specifically, four more alternative nested models including a standalone TPB (model d) and SPD (model e) were also tested and compared based on fit indexes and chi-square difference test, which allowed to decide whether a given model fits significantly better or worse than a competing model (Bryant & Satorra, 2012). Table 4 shows the list of nested models with their fit indexes and chi-square difference test, which compared the fit of alternative model to the unconstrained model (model a).

Four fit indexes: RMSEA, CFI, TLI, and WRMR were presented and followed the cutoff criteria based the standard SEM recommendations to assess the fit of the model of critical consciousness (Hu & Bentler, 1998, 1999; Yu & Muthén, 2002). The recommended cutoff values are: RMSEA values of .06 or below, CFI and TLI values of .95 or above, and WRMR values of 1 or less (Hu & Bentler, 1999; Yu & Muthén, 2002). RMSEA 90% confidence interval

values were also presented. However, since my sample is less than 250, RMSEA can be a problematic index because it tends to over-reject true□population models at small sample size and thus is less preferable when sample size is small (Hu & Bentler, 1999).

To examine the exploratory research question regarding potential racial/ethnic group differences, the multi-group function in M*plus* was used to compare the model of critical consciousness for Asian American and White American samples. Multi-group analysis used the power of the combined sample size (N = 179) to estimate the model's parameters for each racial group (Asparouhov & Muthén, 2012). Furthermore, I also used the WLSMV's robust standard errors to create a 95% confidence intervals (CIs) for the indirect relations; if CI does not contain 0, then it is judged to be significant at $\rho \leq .05$ (Mallinckrodt, Abraham, Wei, & Russell, 2006). Goodness of fit was also examined.

PRELIMINARY ANALYSES

In preliminary analyses, zero-order correlations, descriptive statistics, and Cronbach's alphas for the study variables are in Table 1. There were small to medium positive associations between each of the study's variables and observed social justice behaviors (OSJB); correlations ranged from .20 (perceived behavioral control) and .38 (critical reflection). The descriptive statistics are also presented for each racial group (see Tables 2 and 3). Roughly 41% (n = 74) of participants indicated that they would sign at least one of the social justice petitions: criminal justice reform (n = 67) and/or higher minimum wage (n = 60); roughly 28% (n = 50) indicated they would sign both petitions. Also, there were no racial/ethnic differences between Asian American and White American samples on their commitment to sign the petitions.

TESTING THE INTEGRATED MODEL OF CRITICAL CONSCIOUSNESS

Findings from the unconstrained and four alternative models are shown in Table 4. Fit indices indicate that alternative models b, c, and d provide equally good fit and more parsimonious. Model b and c, however, have slightly better fit indexes with root mean square error of approximation (RMSEA) = 0, conditional fit index (CFI) = 1, Tucker-Lewis Index (TLI) = 1, and weighted root mean square residual (WRMR) = .31. Model b was selected because it provided information to test both TPB and SPD (just wihout interaction term). Also, for the reasons of parsimonity, model b was an alternative and plausible model that bettered account for the relationships among the data. Conceptually, model b did not estimate the moderation effect of PBC. This decision was made because Watts and Flanagan (2007) and Zimmerman and Zahniser (1991) originally conceptualized political efficacy or sociopolitical control as a construct that applied to youth and adolescents, not adults. Thus, perceived behavioral control (PBC) might be a more developmentally appropriate indicator for adolescents in their process of developing critical consciousness (Diemer et al., 2015). Watts and Flanagan (2007) also stated the PBC might act as moderator in the process of critical consciousness for marginalized youth but did not mention whether it would apply for adult population. As a result, I expected the moderation effect of PBC might not exist as well.

Table 1. Descriptive Statistics and Cronbach's Alphas for Variables of Interest Total Sample (N = 179)

Variable	1	2	3	4	5	6	M	SD	α
1. Critical Reflection (CR)	1						6.35	.75	.93
2. Subjective Norms (SN)	.45**	1					5.05	1.14	.87
3. Perceived Behavioral Control (PBC)	.31**	.41**	1				5.58	.96	.86
4. Intention to Act (IA)	.59**	.61**	.53**	1			5.2	1.34	.92
5. Past Social Justice Behaviors (PB)	.30**	.28**	.09	.35**	1		.6	1.04	
6. Observed Social Justice Behaviors (OSJB)	.38**	.24**	.20**	.33**	.32**	1	.77	.89	

Note: * = $\rho \leq .05$ and ** = $\rho \leq .01$. Possible range for CR, SN, PC, IA are 1 to 7. PB and OSJB are ordinal categorical variables

Table 2. Descriptive Statistics and Cronbach's Alphas for Variables of Interest in White Sample (n = 112)

Variable	1	2	3	4	5	6	M	SD	α
1. Critical Reflection (CR)	1						6.34	.74	.92
2. Subjective Norms (SN)	.44**	1					5	1.13	.86
3. Perceived Behavioral Control (PBC)	.27**	.39**	1				5.63	.89	.83
4. Intention to Act (IA)	.66**	.66**	.45**	1			5.15	1.36	.90
5. Past Social Justice Behaviors (PB)	.34**	.31**	.14	.41**	1		0.67	1.15	
6. Observed Social Justice Behaviors (OSJB)	.38**	.29**	.19	.41**	.47**	1	.75	.89	

Note: * = $\rho \leq .05$ and ** = $\rho \leq .01$. Possible range for CR, SN, PC, IA are 1 to 7. PB and OSJB are ordinal categorical variables

Table 3. Descriptive Statistics and Cronbach's Alphas for Variables of Interest in Asian American Sample (n = 67)

Variable	1	2	3	4	5	6	M	SD	α
1. Critical Reflection (CR)	1						6.36	.76	.94
2. Subjective Norms (SN)	.47**	1					5.15	1.17	.89
3. Perceived Behavioral Control (PBC)	.36**	.46**	1				5.48	1.06	.89
4. Intention to Act (IA)	.46**	.53**	.69**	1			5.3	1.3	.95
5. Past Social Justice Behaviors (PB)	.24*	.25*	-.01	.23	1		0.48	0.82	
6. Observed Social Justice Behaviors (OSJB)	.38**	.16	.22	.19	-.02	1	.81	.91	

Note: * = $\rho \leq .05$ and ** = $\rho \leq .01$. Possible range for CR, SN, PC, IA are 1 to 7. PB and OSJB are ordinal categorical variables

Table 4. Model Comparison

Model	$\chi^2(df)$	RMSEA	90% CI LB	90% CI UB	CFI	TLI	WRMR	Nested Model $\chi^2(df)$	ρ
Model a = TPB+SPD	5.87 (5)	.03	.00	.11	.99	.97	.31		
Model b (dropping interaction term)	5.96 (6)	.00	.00	.09	1	1	.31	.03 (1)	.85
Model c = dropping interaction term and PBC	6.52 (7)	.00	.00	.08	1	1	.31	.45 (2)	.79
Model d = TPB	9.5 (7)	.04	.00	.10	.98	.95	.41	3.8 (2)	.14
Model e = SPD	114.72 (10)	.24	.20	.28	.31	-.44	1.97	101.03 (2)	.00

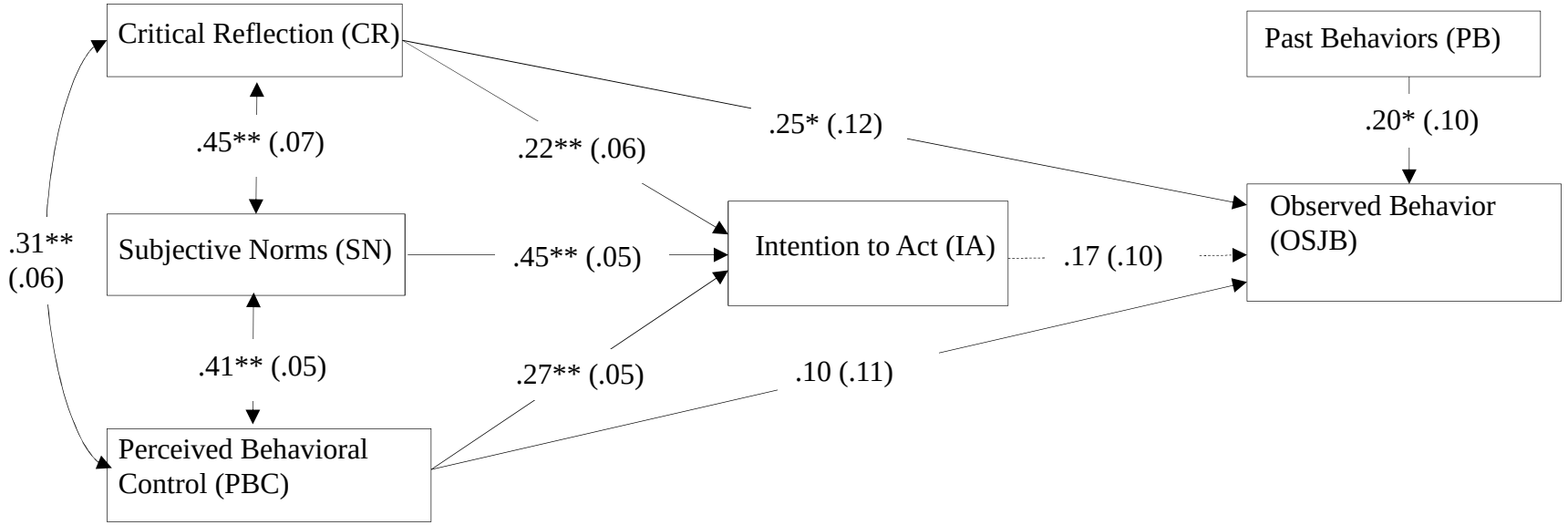

Figure 6. Model b of Critical Consciousness

Note: * = ρ ≤ .05 ; ** = ρ ≤ .01 ; SE are in the parentheses. Dashed lines signify non-significant paths. Values reflect standardized parameter estimates.

INTERGRATED MODEL'S RESULTS

Test of direct and indirect relations: hypothesis 1, 2, and 3

The integrated model's estimates of direct and indirect relations are presented in Figure 4. The chosen model b accounted for 57% of the variance in intention to act (IA), and 29% of the variance in observed social justice behavior (OSJB). Hypothesis 1 was largely supported because the direct relations among study variables were significant; that is, critical reflection, subjective norms, and perceived behavioral control were positively related to intention to act for social justice causes. Hypothesis 2 was not supported in that intention to act for social justice causes (IA) did not have significant association to the observed social justice behaviors (OSJB) while controlling for past behavior (PB). Also, the direct relation of perceived behavioral control (PBC) and the observed social justice behaviors (OSJB) was non-significant (β = .10). Hypothesis 3 was supported as critical reflection (CR) was positively related to OSJB.

Test of moderation: hypothesis 4

Based on the logic of SPD, individuals' perceived behavioral control (PBC) would moderate the relationship between critical reflection (CR) and the observed social justice behaviors (OSJB) (Hypothesis 4). Before conducting this analysis, CR and PBC were centered to reduce multicollinearity. An interaction term was computed by multiplying centered CR and centered PBC and was included in the unconstrained model (model a). The interaction term (coded as CRxPBC) did not have an estimated coefficient to be statistically significant (β = .01) and thus was constrained to be 0 in the chosen model b for the sake of parsimonity. Therefore, I concluded that based on the analysis, hypothesis 4 was not supported by the data.

EXPLORATORY ANALYSIS: RACIAL/ETHNIC DIFFERENCES IN MODEL FIT

The estimated parameters for both White American and Asian American samples are presented in Figure 5 (Asian American sample is listed in the parentheses). Findings among the White American sample were partially consistent with the TPB aspect of the model, in that there were indirect relations in CR-IA, SN-IA, PBC-IA, and IA-OSJB. On the other hand, findings among the Asian American sample indicated support for SPD aspect of the model, in that there was a direct relationship between critical reflection (CR) and observed social justice behaviors (OSJB). In terms of the intention to act for social justice causes (IA), CR (B = .41) and SN (B = .46) had larger effect size than PBC (B = .13) in the White sample. I used the WLSMV's robust standard errors to create 95% confidence intervals (CIs) for the indirect effects for the White sample. Indirect relationships are presented in Table 5. The findings supported that intention to act (IA) mediated the indirect relation between critical reflection (CR), subjective norms (SN) and perceived behavior control (PBC) and the outcome variable, the observed social justice behaviors (OSJB).

Table 5. Unique Indirect Relations in Model b for White Sample

			Standardized indirect relation	Unstandardized indirect relation		95% CI of unstandardized indirect relation	
Predictor	Mediator	Outcome	β	*B*	*SE*	Lower bound	Upper bound
CR	IA	OSJB	.14	.11	.06	.132	.163
SN	IA	OSJB	.11	.12	.06	.102	.123*
PBC	IA	OSJB	.03	.03	.02	.033	.044

Note: * = $\rho \leq .05$

For Asian American sample, SN (B = .29) and PBC (B = .54) had larger effect size on IA than CR (B = .09). IA did not have mediation effect for Asian American sample and past behaviors (PB) was not found to be associated to the observed social justice behaviors. On the

other hand, IA and PB were both positively related to OSJB in White sample (*B* = .26 and .38 respectively). The 95% confidence intervals (CIs) were also created for the indirect effects in the Asian sample in Table 6. This finding confirmed that the mediation effect of IA did not hold in the Asian American sample.

Table 6. Unique Indirect Relations in Model b for Asian Sample

			Standardized indirect relation	Unstandardized indirect relation		95% CI of unstandardized indirect relation	
Predictor	Mediator	Outcome	β	*B*	*SE*	Lower bound	Upper bound
CR	IA	OSJB	-.00	-.00	.01	-.009	.003
SN	IA	OSJB	-.00	-.00	.05	-.017	.007
PBC	IA	OSJB	-.01	-.01	.10	-.035	.013

Note: * = $\rho \leq .05$

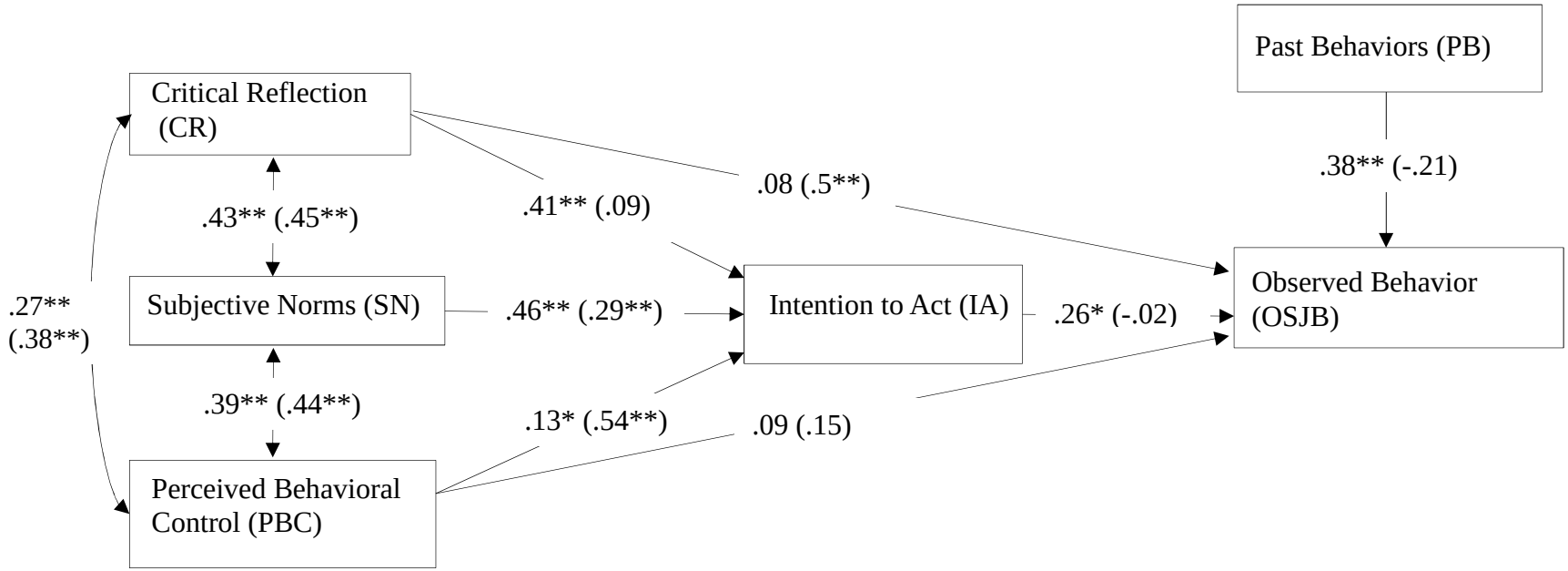

Figure 7. Multi-group model b of Critical Consciousness

Note: * = ρ ≤ .05 ; ** = ρ ≤ .01 ; Estimates for Asian population in parentheses. Values reflect standardized parameter estimates.

CHAPTER 5: DISCUSSION

Systematic inequality and injustices are problems that interweave into society's unfair policies at an institutional level, clinical practices/treatments, and interpersonal relationships. Without addressing larger social justice issues, many communities in the United States may continue to experience marginalization and violence, which in turn, influences mental and behavioral health (Duncan & Hatzenbuehler, 2014; Galea et al., 2011; Padela & Heisler, 2010; Samson, 2015). Freire (1970, 1974) proposed ways to foster the development of critical consciousness, or the personal awareness of systemic inequality and desire to take individual or collective action against social injustices. Critical consciousness has become widely studied topic, especially its linkages to positive long-term outcomes such as overall well-being (Chan et al., 2014; Prilleltensky, 2012), academic adjustment (Cammarota, 2004, 2007; O'Connor, 1997; Sanders, 1997; Yosso, 2002), and career development (Diemer, 2009; Diemer & Blustein, 2006; Diemer et al., 2010). However, the process of people's decision to take action based on their understanding of social problems remains unclear (Watts et al., 2011). The current study was designed to begin to address the gaps in the literature by exploring psychological factors that influence the process of critical consciousness by testing an integrated model of critical consciousness among Asian American and White American adults. The integrated model was grounded in sociopolitical development (SPD) and theory of planned behavior (TPB) frameworks. This study extends the previous literature and provides important information about possible paths to foster critical thinking, social analysis, and political engagement.

Findings provided general support for the integrated model with the linkages consistent with the theory of planned behavior; there was partial support for sociopolitical development theory aspects of the model. Based on the conceptualization of TPB, I found that the intention to

act for social justice causes (IA) mediated the indirect relations between three predictors: critical reflection (CR), subjective norms (SN), and perceived behavioral control (PBC), and the outcome variable, the observed social justice behaviors (OSJB). Particularly in the area of adult's social justice behaviors, subjective norms (SN) had the largest effect (β = .45) on people's intention to act. This underscores the importance of having social groups that advocate for social justice can potentially increase individuals' intention to support and act for social justice causes. The empirical support for TPB in this study is consistent with previous meta-analyses indicating a link between attitude, subjective norms, perceived behavioral control and health related behaviors (e.g., Ajzen, 2011; McEachan et al., 2011; Sheeran, 2002;). However, the effect sizes found in this study for attitude-intention (β = .22) and perceived behavioral control- intention (β = .27) on social justice behavior are much smaller compared to those reported in the previous meta-analyses (e.g., McEachan et al., 2011; Sheeran, 2002). This might be the case due to the measure of observed social justice behavior (OSJB), which was limited to signing two online petitions. However, the relationship between intention and the observed social justice behavior (OSJB) was non-significant (β = .17). This was consistent with Watts and Guessous' (2006) study, which showed social analysis, sense of agency, and cultural worldview had larger effects on commitment to societal involvement but did not predict behaviors.

In the multi-group explanatory analysis, the hypotheses grounded in the TPB framework were supported primarily in the White American sample. Specifically, the links between critical reflection-intention, subjective norms-intention, perceived behavioral control-intention were significant. Additionally, the intention-behavior (β = .26) association was significant compared to the same estimated parameter in the combined Asian American and White American sample while controlling for past behavior (PB) (β = .38). Moreover, critical reflection's relation with

the observed social justice behavior was statistically non-significant among White Americans in this study. In the Asian American sample, subjective norms-intention and perceived behavioral control-intention were significant, while critical reflection-intention was non-significant. Intention-behavior and past behavior-behavior also did not have a statistically significant result among the Asian American adult sample.

Another contribution of this study is that findings provide support for the direct positive relation between critical reflection (CR) and the observed social justice behavior (OSJB) as hypothesized in SPD. However, this result did not hold in the multi-group analysis when model b was estimated separately for Asian Americans and White Americans in the sample. CR was the most important predictor of OSJB among the Asian Americans in the sample. Specifically, CR was positively associated with OSJB among Asian Americans but not White Americans. Thus it seems that the conceptualization of critical consciousness from SPD seemed to fit better with for Asian Americans in this study.

It is not surprising the conceptualization of critical consciousness based on the TPB was a better fit for White Americans in this study. TPB is a well-established model that can be generalized for a variety of behaviors, particularly among White American samples. Findings from this study provide empirical support for TPB in understanding social justice behaviors, particularly for the White American sample, as hypothesized by Torres-Harding et al. (2012). The results indicated the importance of developing ally activism among White Americans, and particularly for this group, subjective norms (individual's social network that support social justice causes) and critical social analysis of systematic inequality can be important factors to foster the intention and action in social justice.

On the other hand, SPD was conceptualized based on the experiences of marginalized populations (Watts et al., 2003), thus it stands to reason that SPD provided a better fit of the data for the Asian American sample. For Asian Americans in this study, the critical understanding of systematic inequality alone can act as a powerful factor in promoting action against social injustices. Furthermore, subjective norms and perceived behavior control (individuals' perceived capacity and efficacy in creating social change through their actions) also can foster intention to act for social justice causes in the Asian American sample.

Counter to our hypotheses, the findings did not support the moderation effect of perceived behavioral control (PBC) on the relationship of CR and OSJB. Thus, it seemed that higher level of PBC was not related to stronger association between CR and OSJB and vice versa in this sample. This outcome is inconsistent with Watts and Guessous' (2006) findings. One reason for the equivocal findings may be the different populations sampled – Watts and Geussous' sample was composed of urban primarily African American youth and not adults (Asian American and White American). Previously, other researchers stated that perceived efficacy and control might be a more developmentally appropriate indicator for youth in their process of developing critical consciousness, given the many age-based constraints young people face to actual civic participation or social activism (Diemer et al., 2015). Additionally, Watts and Flanagan (2007) originally conceptualized political efficacy as a moderator in the process of critical consciousness among marginalized youth but did not mention whether it would apply for adult population. Consequently, my finding suggests the moderation effect of PBC may not be present among adults.

Another unexpected finding was the non-significant relationship between perceived behavioral control (PBC) and the observed social justice behaviors (OSJB) in the study. This

result was similar to some of Diemer and Li's (2011) finding in that sociopolitical control (the perceived efficacy to effect social and political change) did not predict social action in their sample of marginalized youth. The current study replicated of what Watts and Guessous (2006) found in their study, which showed sense of agency was positively related to commitment to societal involvement but did not predict behaviors. In other words, in this adult sample, individuals with higher perceived behavioral control, or capacity and efficacy of performing the behavior, are more likely to have more intention to support and act for social justice causes.

LIMITATIONS AND FUTURE DIRECTIONS

Although the findings begin to address gaps in the literature, the limitations of the study should be considered when interpreting the results. Due to the small sample size and lack of diversity within the sample, it is important to recognize the issues of generalizability of this study. The current study is limited two only two racial/ethnic groups: Asian American and White American, and there is not enough diversity within the Asian American sample to explore potential ethnic group differences (e.g., Chinese American compared to Korean American). Thus, the findings should not be generalized to all Asian American subgroups. It is also important to replicate these findings with more diverse sample in term of race or ethnicity, social class, and education. In addition, self-reported behavior may not be accurate because there is no objective measure of whether individuals did sign the online petition. Future studies should take into consideration including multiple measures of the observed behavior. Another consideration of this study is the use of cross-sectional data to test the integrated model of critical consciousness. Additionally the survey items in Social Justice Scale are not counter balanced, thus we do not know if there is an order effect. Future research should test the mediation model

with longitudinal data in order to provide more empirical understanding of the process of critical consciousness.

IMPLICATIONS

Due to its positive and long-term benefits in developing one's critical consciousness, it is important for educators, counselors and policy makers to understand psychosocial factors that influence the process of critical consciousness. Especially under current polarized and hostile political and social climate, fostering critical consciousness and social justice behaviors can promote systematic level changes against injustices and oppression (Freire, 1970; Martín-Baró et al., 1994; Watts et al., 2003) while nurture healing and hope in marginalized and oppressed populations (Ginwright, 2011; Watts et al., 1999). To bolster social and ally activism among White American adult, educators and counselors can create a supportive, safe and open environment to facilitate daily difficult conversion about different systems of inequality (e.g., race, class, gender, and etc.) to increase individuals' critical reflection, which in turn strengthening their intention to act and fostering more social justice activities. It is also important to build a social, communal, or personal sphere of influence that promote social justice and continue difficult but hopeful dialogues so that these messages can become positive social norms to increase individuals' activism. Moreover, subjective norms can be a powerful influence through close relationship such as friendship and mentorship to motivate one's behavior as well as bolster self-efficacy in creating social and transformative changes through. For Asian Americans, it may be important for educators and counselors to include social justice agenda in clinical approach and teaching agenda by continually educating and providing information about the history and current status of different systems of inequality, which increase people's critical social analysis and in turn promote their social justice activities.

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APPENDIX A: MEASURES AND ADDITIONAL ANALYSES

MEASURES

Social Justice Scale (SJS) was chosen out of four recent developed scales to measure critical consciousness. Three other measures of critical consciousness, the Measure of Adolescent Critical Consciousness (MACC) (McWhirter and McWhirter, 2016), the Critical Consciousness Inventory (CCI) (Thomas et al., 2014), and the Critical Consciousness Scale (CCS) (Diemer et al., 2014) were not chosen because they were not appropriate for White and Asian American young adult populations being studied in this project. For example, MACC was developed and validated with samples of Latino/a adolescents. CCI was developed and validated with a diverse sample of students from a predominantly White postsecondary institution and a Historically Black College/University, but it did not have a measure for sense of agency or critical action. CCS was developed and validated with predominantly poor and working class African American youth attending urban high schools. On the other hands, Torres-Harding et al. (2012) Social Justice Scale (SJS) was developed and validated with a diverse sample of undergraduate and graduate students, which included emerging adults and young adults. Therefore, SJS provides a better fit for this study.

ADDITIONAL ANALYSES

Additional analyses were done to see if there are differences between two petitions with different social justice themes. These results were obtained for both Asian American and White American samples. Figure 6 showed the findings for the integrated model b of critical consciousness using the petition with criminal justice reform theme (Jones, 2016) for both racial groups. Figure 7 displayed the results for both racial groups using the petition with higher minimum wage theme (The Fairness Project, 2016).

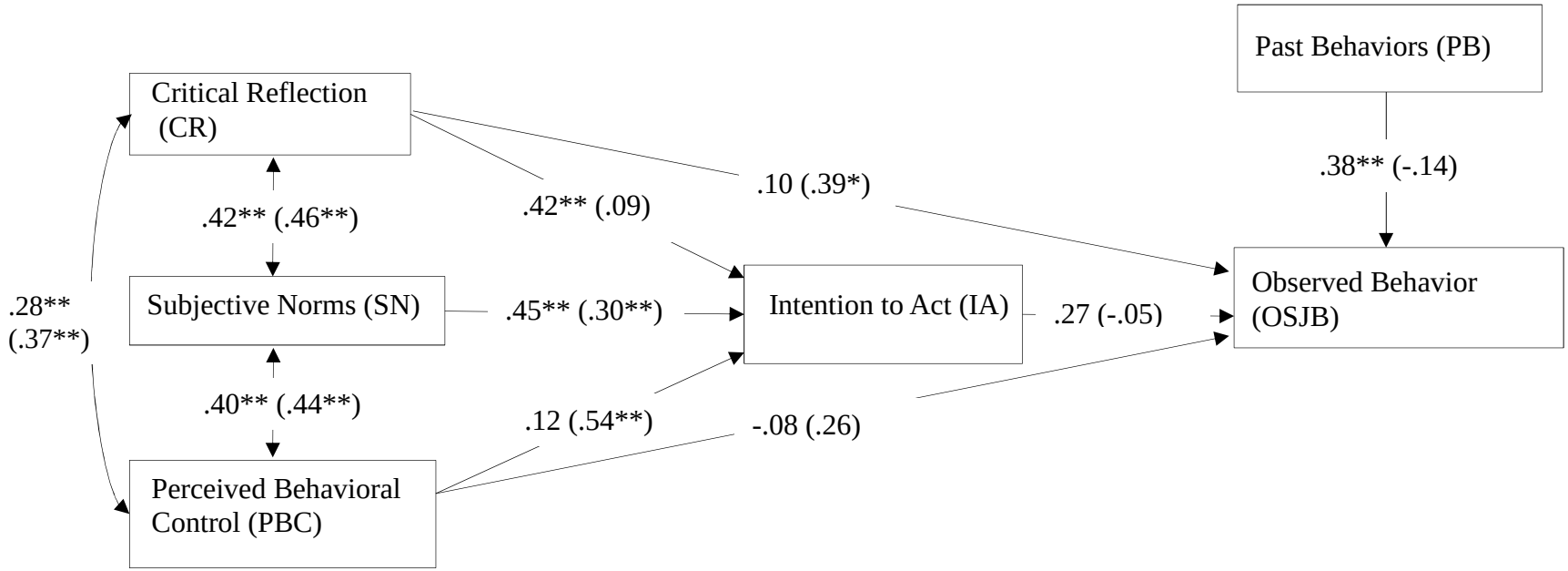

Figure 8. Multi-group model b of Critical Consciousness using Justice Petition

Note: * = $\rho \leq .05$; ** = $\rho \leq .01$; Estimates for Asian population in parentheses. Values reflect standardized parameter estimates.

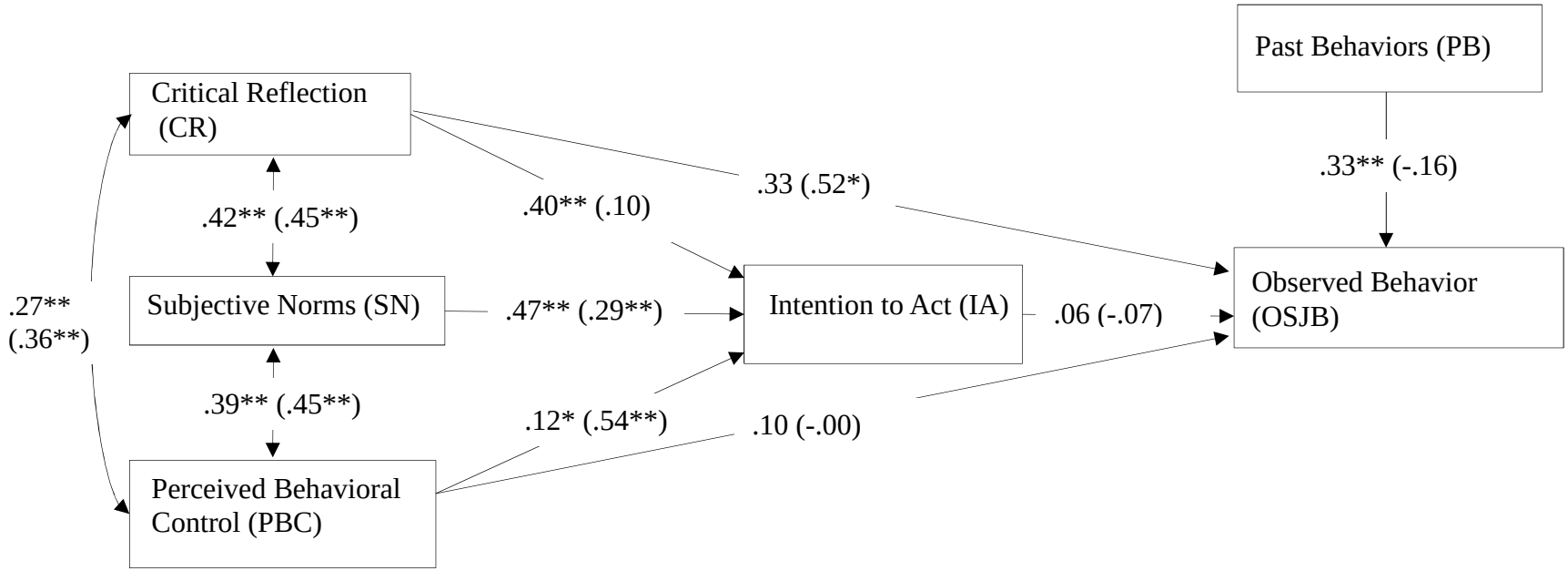

Figure 9. Multi-group model b of Critical Consciousness using Minimum Wage Petition
Note: * = ρ ≤ .05 ; ** = ρ ≤ .01 ; Estimates for Asian population in parentheses. Values reflect standardized parameter estimates.

APPENDIX B: IRB LETTER

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

Office of the Vice Chancellor for Research

Office for the Protection of Research Subjects
528 East Green Street
Suite 203
Champaign, IL 61820

May 31, 2016

Helen Neville
Department of Educational Psychology
226 Education Bldg
1310 South Sixth Street
Champaign, IL 61820

RE: *UIUC Campus Diversity Project: Follow-up Survey*
IRB Protocol Number: 16906

Dear Dr. Neville:

This letter authorizes the use of human subjects in your project entitled *UIUC Campus Diversity Project: Follow-up Survey*. The University of Illinois at Urbana-Champaign Institutional Review Board (IRB) approved, by expedited review, the protocol as described in your IRB application. The expiration date for this protocol, IRB number 16906, is 05/25/2017. The risk designation applied to your project is *no more than minimal risk*.

Note: Drs. Spanierman and Poteat should not be involved in the research study until an agreement has been reached between their respective IRBs and the UIUC IRB. If Boston College and/or Arizona State University do not want any oversight or agreement, an individual investigator agreement (IAA) can be completed between UIUC and each investigator.

Copies of the attached date-stamped consent form(s) must be used in obtaining informed consent. If there is a need to revise or alter the consent form(s), please submit the revised form(s) for IRB review, approval, and date-stamping prior to use.

Under applicable regulations, no changes to procedures involving human subjects may be made without prior IRB review and approval. The regulations also require that you promptly notify the IRB of any problems involving human subjects, including unanticipated side effects, adverse reactions, and any injuries or complications that arise during the project.

If you have any questions about the IRB process, or if you need assistance at any time, please feel free to contact me at the OPRS office, or visit our Web site at http://oprs.research.illinois.edu.

Sincerely,

Dustin D. Yocum

Dustin Yocum, MA, CIP
Human Subjects Research Specialist, Office for the Protection of Research Subjects

Attachment(s): Online informed consent document; and Waiver of Documentation of Informed Consent

UNIVERSITY OF ILLINOIS
AT URBANA–CHAMPAIGN

Department of Educational Psychology

College of Education
226 Education Building
1310 South Sixth Street
Champaign, IL 61820

CONSENT FORM

I consent to participate in a study entitled, "UIUC Campus Diveristy Project: Follow-up Survey" directed by Dr. Helen Neville of the Department of Educational Psychology at the University of Illinois at Urbana-Champaign, Dr. Lisa Spanierman of Counseling and Counseling Psychology at Arizona State University, and Dr. Paul Poteat at Boston College. A small number of trained researchers may assist Drs. Neville, Spanierman, and Poteat on the project. I understand that the purpose of this study is to examine UIUC alumni's attitudes about diversity. This is a follow-up to the survey I completed during my first year at UIUC. I understand that participation consists of completing a brief (10 minutes) online survey and an email request to support one social issue, but the latter will be sent under separate cover.

I understand that my participation in this project is completely voluntary. A potential benefit of my participation is that I may learn more about my diversity attitudes. There will be no negative consequences if I decide not to participate. I have the right to discontinue my participation at any time without penalty. Should I decide not to participate, this will have no effect on my current or future relations with the University of Illinois. Moreover, participation is not expected to cause any harm outside of what is normally encountered in daily life. In the rare event that I become upset or deeply offended by an item, I may choose to skip the item.

Will my study-related information be kept confidential?

Yes, but not always. In general, we will not tell anyone any information about you. When this research is discussed or published, no one will know that you were in the study. However, laws and university rules might require us to disclose information about you. For example, if required by laws or University Policy, study information may be seen or copied by the following people or groups:

- The university committee and office that reviews and approves research studies, the Institutional Review Board (IRB) and Office for Protection of Research Subjects;
- University and state auditors, and Departments of the university responsible for oversight of research;

Several safeguards will be taken to protect my identity. My name will not be listed on the survey. Rather, I will identify a personal code number, which will be assigned to my survey. My responses will be sent directly to a password-protected database, separate from my name and email address, accessible only to the primary researchers. The master list with the names, contact information, and corresponding code numbers will be kept in a secure location, separate from the data that I contribute.

I understand that results from this study may be published in a professional journal or government grant application, but I will not be identified as an individual. Instead, results will be reported as group averages.

I understand that as a token of appreciation for my participation, I will be given an opportunity to enter my name into a drawing to win one of three Visa card awards: one $200 award and two $100 awards.

telephone 217-333-2245 • *toll free* 888-843-3779 • *fax* 217-244-7620
email edpsy@uiuc.edu • *url* http://www.ed.uiuc.edu/EDPSY

My chances of winning are greater than or equal to 1 in 400. The Visa card awards will be selected shortly after the survey administration and the winners will be notified by email.

If I have any questions or concerns about participation in this research, I may contact Dr. Helen Neville (217-244-6291; hneville@uiuc.edu) or Dr. Lisa Spanierman (480-727-2605; Lisa.Spanierman@asu.edu).

If you have any questions about your rights as a participant in this study or any concerns or complaints, please contact the University of Illinois Institutional Review Board at 217-333-2670 or via email irb@illinois.edu

Please click the proper bottom

Please print a copy of this consent form for your records, if you so desire.

I have read and understand the above consent form, I certify that I am 18 years old or older and, by clicking the submit button to enter the survey, I indicate my willingness voluntarily take part in the study.

Summit

Last Page after Completing the Web Survey

Thank you very much for participating in this study. Please enter the following information to register for the drawing to a receive a Visa gift card award: one $200 Visa gift card or one of two $100 Visa gift cards.

Name: _____

Phone number and/or e-mail address: _____

University of Illinois at Urbana-Champaign
Institutional Review Board

Approved: 5-26-16
Expires: 5-25-17
IRB #: 16906

University of Illinois
at Urbana–Champaign

Institutional Review Board Office
528 East Green Street, Suite 203, MC-419
Champaign, IL 61820
tel: 217-333-2670 fax: 217-333-0405
E-mail: irb@illinois.edu Web: www.irb.illinois.edu

WAIVER OF DOCUMENTATION OF INFORMED CONSENT (45CFR46.117(C))

ALL APPLICATIONS MUST BE TYPEWRITTEN, SIGNED, AND SUBMITTED AS SINGLE-SIDED HARD COPY. PLEASE, NO STAPLES!

Responsible Project Investigator (RPI):

Last Name: Neville	First Name: Helen	Dept. or Unit: ESPY
Phone: 217-898-1022	Fax:	E-mail: hneville@illinois.edu

Project Title:

UIUC Campus Diversity Project: Follow-up Survey

To request a waiver of documentation (signature) of informed consent, please provide a response to EITHER of the following questions. Please be specific in explaining why either statement is true for this research.

(1) That the only record linking the subject and the research would be the consent document and the principal risk would be potential harm resulting from a breach of confidentiality. Each subject will be asked whether the subject wants documentation linking the subject with the research, and the subject's wishes will govern. *Note: A waiver of documentation of informed consent is **not permissible under this category if the research is subject to FDA regulation.**

(2) The research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context. **

This online survey research project presents minimal risk or harm to the participants. Participants have an opportunity to skip questions that may offend them. And, the online nature of the research prohibits us from obtaining a hard copy of a signed consent form.

** In cases in which the documentation requirement is waived, the IRB may require the investigator to provide subjects with a written statement regarding the research.

RPI Signature: _____ Date: May 27, 2016

IRB Member Approval: _____ Date: _____

University of Illinois at Urbana-Champaign
Institutional Review Board

Approved: 5-26-16
IRB #: 16906

062010 rev

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

Office of the Vice Chancellor for Rese
Office for the Protection of Research Subje
805 West Pennsylvania Ave
Urbana, IL 61801

May 31, 2017

Helen Neville
Educational Psychology
226 Education Bldg
1310 South Sixth Street
Champaign, IL 61820

RE: *UIUC Campus Diversity Project: Follow-up Survey*
IRB Protocol Number: 16906

Dear Dr. Neville:

You have indicated that your continuing project entitled *UIUC Campus Diversity Project: Follow-up Survey,* Institutional Review Board (IRB) protocol number 16906, is undergoing data analysis only and that you are no longer gathering data from human subjects. The University of Illinois at Urbana-Champaign IRB has approved, by expedited continuing review, continuation of your project for data analysis only; the approval expires on 05/30/2020.

Note: Previous IRB approval for this protocol expired on 05/25/2017. All research activities should have ceased between 05/26/2017 and 05/30/2017. Data collected during this period may not be used.

Because this approval is only for data analysis, you are *not authorized* to involve human subjects in any aspect of the protocol and we have not returned any consent forms related to the project. IRB approval must be obtained to reinitiate enrollment of human subjects in this protocol.

You were granted a three-year approval. If there are any changes to the protocol that result in your study becoming ineligible for the extended approval period, the RPI is responsible for immediately notifying the IRB via an amendment. The protocol will be issued a modified expiration date accordingly.

If you have any questions about the IRB process, or if you need assistance at any time, please feel free to contact me at the OPRS office, or visit our website at https://www.oprs.research.illinois.edu.

Sincerely,

Ronald A Banks

Ron Banks, MS, CIP
Human Subjects Research Coordinator, Office for the Protection of Research Subjects